

Claims

1. Wind power unit with a mast, a rotor with several rotor blades, a gondola and optionally further components, around
5 which there is a flow, characterized in that the surface of the mast (12) and/or the rotor blades (18) and/or the gondola (19) and/or the further components at least partly comprises recesses (1) to improve flow.
- 10 2. Wind power unit according to Claim 1, characterized in that the recesses (1) essentially have the form of a hemisphere or a half-teardrop.
3. Wind power unit according to Claim 1 or 2,
15 characterized in that the recesses (1) are arranged regularly.
4. Wind power unit according to one of the preceding Claims, characterized in that the recesses (1) are arranged in rows.
- 20 5. Wind power unit according to Claim 4, characterized in that the rows are arranged offset in respect of each other.
6. Wind power unit according to one of the preceding Claims,
25 characterized in that in the case of a rotor blade (18) the recesses (1) are arranged essentially in the region between the transition point between laminar and turbulent flow and the final edge of the rotor blade (18).
- 30 7. Wind power unit according to one of the preceding Claims, characterized in that the recesses (1) are configured on a flat support material, which can be fixed on or to the wind

power unit (17).

8. Wind power unit according to Claim 7,
characterized in that the support material is a film (13).

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9. Wind power unit according to one of the preceding
Claims,
characterized in that the structure and profiles of the rotor
blades (18) are tailored to the stall speed as modified by the
10 recesses (1).

10. Wind power unit according to one of the preceding Claims,
characterized in that the control software is tailored to the
stall speed as modified by the recesses (1).

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11. Wind power unit according to one of the preceding Claims,
characterized in that its surface is not susceptible to dirt
and ice.

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Claims

1. Wind power unit with a mast, a rotor with several rotor blades, a gondola and optionally further components, around
5 which there is a flow, such that the surface of the mast (12) and/or the rotor blades (18) and/or the gondola (19) and/or the further components at least partly comprises recesses (1) to improve flow, characterized in that in the case of a rotor blade (18) the recesses (1) are arranged essentially in the
10 region between the transition point between laminar and turbulent flow and the final edge of the rotor blade (18) and that the form and configuration of the recesses (1) are designed such that as the air sweeps past the recess (1), an eddy (3) forms in the recess (1), which assists the passage of
15 the air and accelerates the air volume.

2. Wind power unit according to Claim 1,
characterized in that the recesses (1) essentially have the form of a hemisphere or a half-teardrop.
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3. Wind power unit according to Claim 1 or 2,
characterized in that the recesses (1) are arranged regularly.

4. Wind power unit according to one of the preceding Claims,
25 characterized in that the recesses (1) are arranged in rows.

5. Wind power unit according to Claim 4,
characterized in that the rows are arranged offset in respect of each other.
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6. Wind power unit according to one of the preceding Claims,
characterized in that the recesses (1) are configured on a flat support material, which can be fixed on or to the wind

power unit (17).

7. Wind power unit according to Claim 6,
characterized in that the support material is a film (13).

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8. Wind power unit according to one of the preceding
Claims,
characterized in that the structure and profiles of the rotor
blades (18) are tailored to the stall speed as modified by the
10 recesses (1).

9. Wind power unit according to one of the preceding Claims,
characterized in that the control software is tailored to the
stall speed as modified by the recesses (1).

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10. Wind power unit according to one of the preceding Claims,
characterized in that its surface is not susceptible to dirt
and ice.

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